CLAIMS

1. A method of identifying information addressed to a user in a communication system, the method comprising

(604) transmitting, on a shared channel on which two or more receivers receive, data packets provided with a training sequence, and

(606) generating a channel estimate in a receiver on the basis of the training sequence,

characterized in that

data packets addressed to different receivers or receiver groups are provided with different training sequences,

(610) identified as data packets addressed to the receiver, and those received data packets whose training sequence the receiver identifies are further processed in the receiver, and

the data packets whose training sequence the receiver does not identify are ignored in the receiver.

2. A method as claimed in claim 1, **characterized** in that said identifying step comprises the steps of:

comparing, in the receiver, the value of the channel estimate with a threshold value measuring the quality of the channel, and

further processing the data packet when the value of the channel estimate exceeds the threshold value,

ignoring the data packet when the value of the channel estimate is less than the threshold value.

3. A method as claimed in claim 2, **characterized** in that said channel estimate value is the signal interference ratio (SIR), the carrier/interference ratio (C/I), the bit error rate (BER), or the ratio of chip energy to disturbance power frequency (E_c/I_0).

4. A method as claimed in claim 1, 2 or 3, **characterized** in that the training sequence that the receiver is to use on the shared channel is indicated to the receiver before handover to a shared channel.

5. A method as claimed in claim 1, 2, 3 or 4, **characterized** in that

the receiver receives time dividedly both on said shared channel and a parallel dedicated channel.

6. A method as claimed in claim 5, **characterized** in that the

parallel dedicated channel is a control channel.

7. A method as claimed in claim 5 or 6, **characterized** in that each dedicated channel uses a different training sequence.

8. A method as claimed in claim 5, 6 or 7, **characterized** in that the receiver uses on the shared channel the same training sequence as on the parallel dedicated channel.

9. A method as claimed in any one of claims 1 to 8, **characterized** in that the training sequence is indicated to the receiver via a common control channel or a parallel dedicated channel before handover to the shared channel.

10. A method as claimed in claim 1 or 2, **characterized** in that performing a CRC (Cyclic Redundancy Check) on the accepted data packets of the shared channel before further processing.

11. A method as claimed in claim 1, 2 or 5, **characterized** in that the threshold value for the channel estimate is generated on the basis of a data packet received on the dedicated channel.

12. A method as claimed in any one of the preceding claims, **characterized** in that the communication system is a time division multiple access type of cellular radio network, and that said shared channel is a timeslot and said data packet is a radio burst to be sent in the timeslot and comprising at least said training sequence and data.

13. A method as claimed in claim 10, **characterized** in that the time division duplex principle (TDD) is used on the carrier on which the shared channel is.

14. A method as claimed in claim 10 or 11, **characterized** in that several radio bursts are simultaneously sent in a timeslot of the shared channel on the CDMA principle using different spreading codes, and that different training sequences are used in radio bursts for different receivers or receiver groups.

15. A method as claimed in claim 12, **characterized** in that the receiver receives simultaneously several radio bursts with different spreading codes and accepts one or more radio bursts whose training sequence it identifies.

16. A method as claimed in claim 12 or 13, **characterized** in that the receiver identifies a radio burst by means of both the training sequence and the spreading code.

17. A method as claimed in any one of claims 10 to 14, **characterized** in that a shared timeslot is allocated one TDMA frame at a time, and the training sequence is used to indicate to which receiver or receiver group the timeslot is allocated in each frame.

18. A communication system, comprising at least one transmitter (120) and at least one receiver (UE), in which communication system

the transmitter (120) is arranged to transmit on a shared channel (312) data packets (330A to 330D) provided with a training sequence (300), on which channel two or more receivers (UE) are arranged to receive said data packets (330A to 330D), and

the receiver (UE) is arranged to generate a channel estimate on the basis of the training sequence (300),

characterized in that

the communication system is arranged to provide the data packets (330A to 330D) addressed to different receivers (UE) or receiver groups with different training sequences (300),

the receiver (UE) is arranged to identify and further process the data packets (330A to 330D) addressed to the receiver (UE) and whose training sequence (300) the receiver (UE) identifies, and

the receiver (UE) is arranged to ignore the data packets (330A to 330D) whose training sequence (300) the receiver (UE) does not identify.

19. A communication system as claimed in claim 18, **characterized** in that

the receiver is arranged to compare the value of the channel estimate with a threshold value measuring the quality of the channel,

the receiver is arranged to further process the data packet when the value of the channel estimate exceeds the threshold value, and

the receiver is arranged to ignore the data packet when the value of the channel estimate is less than the threshold value.

20. A communication system as claimed in claim 19, **characterized** in that said channel estimate value is the signal interference ratio (SIR), the carrier/interference ratio (C/I), the bit error rate (BER), or the ratio of chip energy to disturbance power frequency (E_c/I_0).

21. A communication system as claimed in claim 18, 19 or 20, **characterized** in that the transmitter is arranged to indicate the training sequence that the receiver is to use on the shared channel before handover to

a shared channel.

22. A communication system as claimed in claim 18, 19, 20 or 21, **characterized** in that the receiver is arranged to receive time dividedly both on said shared channel and a parallel dedicated channel.

23. A communication system as claimed in claim 22, **characterized** in that the parallel dedicated channel is a control channel.

24. A communication system as claimed in claim 22 or 23, **characterized** in that the communication system is arranged to use a different training sequence on each dedicated channel.

25. A communication system as claimed in claim 22, 23 or 24, **characterized** in that the receiver is arranged to use on the shared channel the same training sequence as on the parallel dedicated channel.

26. A communication system as claimed in any one of claims 17 to 25, **characterized** in that the transmitter is arranged to indicate the training sequence to the receiver via a common control channel or a parallel dedicated channel before handover to the shared channel.

27. A communication system as claimed in claim 18 or 19, **characterized** in that the receiver is arranged to perform a CRC (Cyclic Redundancy Check) on the accepted data packets of the shared channel before further processing.

28. A communication system as claimed in claim 18, 19 or 22, **characterized** in that the receiver is arranged to generate the threshold value for the channel estimate on the basis of a data packet received on the dedicated channel.

29. A communication system as claimed in any one of the preceding claims, **characterized** in that the communication system is a time division multiple access type of cellular radio network, and that said shared channel is a timeslot and said data packet is a radio burst to be sent in the timeslot and comprising at least said training sequence and data.

30. A communication system as claimed in claim 29, **characterized** in that the communication system is arranged to use the time division duplex principle (TDD) on the carrier on which the shared channel is.

31. A communication system as claimed in claim 29 or 30, **characterized** in that the transmitter is arranged to send several radio bursts simultaneously in a timeslot of the shared channel on the CDMA principle using different spreading codes, and that the transmitter is arranged to use dif-

ferent training sequences in radio bursts for different receivers or receiver groups.

32. A communication system as claimed in claim 31, **characterized** in that the receiver is arranged to receive simultaneously several radio bursts with different spreading codes, and the receiver is arranged to accept one or more radio bursts whose training sequence it identifies.

33. A communication system as claimed in claim 31 or 32, **characterized** in that the receiver is arranged to identify a radio burst by means of both the training sequence and the spreading code.

34. A communication system as claimed in any one of claims 29 to 33, **characterized** in that the communication system is arranged to allocate a shared timeslot one TDMA frame at a time, and the transmitter is arranged to use the training sequence to indicate to which receiver or receiver group the timeslot is allocated in each frame.

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